REMARKS

In the Office Action, the Examiner rejected claims 1-55. No claims have been added, cancelled, or amended by this paper. In light of the remarks set forth below, Applicants respectfully request reconsideration and allowance of all pending claims.

Interview Summary

In accordance with 37 C.F.R. § 1.133 and M.P.E.P. § 713.04, Applicants present the following summary of a telephonic interview between the Examiner and the Applicants' Attorneys, Robert A. Manware, Reg. No. 48,758 and David M. Hoffman, Reg. No. 54,174. The interview was conducted on August 5, 2005, at approximately 11:00am E.S.T.

The interview was initiated by the Applicants' Attorneys to discuss the Miller reference (U.S. Patent No. 6, 308,265) and the Mattison reference (U.S. Patent No. 5,778,070), as they relate to the independent claims in the present application. In particular, Applicants' Attorneys asserted to the Examiner that the Miller reference and the Mattison reference do not disclose or suggest a "BIOS program having a *second validation routine* configured to validate the boot block program," as recited in claim 1, for example. (Emphasis added). After a detailed discussion, however, Applicants' Attorneys and the Examiner were unable to reach an agreement. As suggested by the Examiner, the present response is being submitted to memorialize Applicants' present position in the hopes that an agreement can be reached without further prosecution.

Rejection under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1-10, 12-19, 21-30, 32-26, 38-43, 45-49, and 51-55 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,778,070 to Mattison (hereafter referred to as "the Mattison reference") in view of U.S. Patent No. 6,308,265 to Miller (hereafter referred to as "the Miller reference"). The Examiner also rejected claims 11, 20, 31, 37, 44, and 50 under 35 U.S.C. § 103(a) as being unpatentable over the Mattison reference in view of the Miller reference and in further view of U.S. Patent No. 6,401,208 B2 to Davis et al. (hereafter referred to as "the Davis Reference"). Applicants respectfully traverse these rejections.

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (B.P.A.I. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). The mere fact that references <u>can</u> be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d. 1430 (Fed. Cir. 1990). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985).

Claims 1-10, 12-19, 21-30, 32-36, 38-43, 45-49, and 51-55

The present application "relates generally to protecting a computer system and, more particularly, to protecting at least one of a BIOS, Boot-Block, CMOS, and NVRAM in a computer system." Page 2, lines 7-9. In one embodiment, "the boot-block [program] is used to validate the BIOS using an encryption algorithm and the BIOS is then used to validate the Boot Block using an encryption algorithm. Indeed, this particular combination may provide the best security for the computer system." Page 20, line 19-24. Accordingly, independent claim 1 recites a "boot-block program having a *first validation routine* configured to validate the BIOS program... and the BIOS program having a *second validation routine* configured to validate the boot-block program." (Emphasis added). Independent claim 21 recites "means for validating a BIOS program... by a boot-block program" and a "means for validating the boot-block program... *by the BIOS program.*" (Emphasis added). Independent claim 42 recites a method comprising "validating a BIOS program...by a boot-block program" and "validating the boot-block program.... *by the BIOS program.*" (Emphasis added).

Applicants respectfully assert that claims 1, 29, and 42 are allowable because the cited references, taken alone or in combination, fail to teach or suggests the above-recited claim features. In contrast to the present application, the Mattison reference is directed towards a method for protecting "flash memory containing a program such as a Basic Input/Output System from any unauthorized reprogramming efforts." Mattison, col. 2, lines 56-60. The mechanism disclosed in the Mattison reference performs this function by determining whether a flash memory upgrade is valid, and then only permitting the flash memory to be reflashed if the flash memory upgrade is valid. *See* Mattison, col. 9, lines 52-57; *see also* Fig. 3, blocks 308-314. At no point during this process, does the mechanism described in

16

the Mattison reference prevent booting of a computer - it merely prevents the upgrade. *See id.* Accordingly, the software described in the Mattison reference clearly would not qualify as a "boot-block program," as recited in independent claims 1, 29, and 42, because it does not prevent booting. As such, the Mattison reference does not disclose a "boot-block" program, and thus cannot disclose a "BIOS program having a second validation routine configured to *validate a boot-block program*," as recited in claim 1 or the other above-described limitations of claims 29 and 42, because there is simply no boot block program present in the Mattison reference.

The Miller reference cannot cure this deficiency in the Mattison reference, because the Miller reference also does not disclose a BIOS program having a second validation routine configured to validate a boot-block program, as recited in independent claims 1, 19, and 41. Specifically, the Miller reference merely discloses a "method for protecting boot-block code *while allowing updating to BIOS code* during a flash BIOS operation." Miller, Abstract, lines 1-3 (emphasis added). In particular, the Miller reference discloses a method for insuring that boot-block code is not corrupted when the system BIOS is upgraded. *See* Miller, col. 5, line 23-31. The validation instructions, however, are not stored within a BIOS program, because at the time that the Miller apparatus is determining whether the boot-block program has been corrupted, the BIOS program is being upgraded with a new BIOS image. *See* Miller, Fig. 3, blocks 350 and 360. In other words, the BIOS program of the Miller reference cannot store the instructions for checking the boot-block program, because at the time that the Miller system checks the boot-block program, the BIOS program itself is in the midst of being changed. *See id.* As such, the Miller reference also does not disclose the above-recited claimed features. For these reasons, it is clear that the Mattison and Miller references, taken alone or in

combination, fail to teach or suggest the above-recited claim features of independent

claims 1, 29, and 42. As such, Applicants respectfully assert that independent claims 1,

29, and 42 and the claims that depend therefrom are patentable over cited references.

Claims 19, 36, and 49

In addition to the missing features outlined above regard to claims 1, 29, and 42,

Applicants respectfully assert that the cited references also do not disclose several features

of dependent claims 19, 36, and 49. For example, dependent claim 19 recites a system

"wherein the BIOS program validates the boot-block program by *calculating a first hash*

of the boot-block program using the hash algorithm... [and] *using the public key to*

decrypt the encrypted hash to produce a second hash." (Emphasis added). Dependent

claim 36 recites a system "wherein the means for validating the boot-block program

comprises...means for *calculating a first hash* of the boot-block program...[and] means

for *decrypting the encrypting hash* using the public key to produce a second hash."

(Emphasis added). Dependent claim 49 recites a method comprising *"calculating a first*

hash of the boot-block program...[and] *decrypting the encrypted hash* using the public

key to produce a second hash." (Emphasis added).

Applicants respectfully assert that dependent claims 19, 36, and 49 are allowable

because the cited references do not teach or suggest the above-recited claims features.

First, as described above in regard to independent claims 1, 29, and 42, the Mattison

reference does not disclose or suggest a boot-block program, and, as such, cannot disclose

validating a boot-block program, as recited in dependent claims 19, 36, and 49. The

Miller reference cannot cure this deficiency in the Mattison reference, because the Miller

reference makes no mention of either hashing or encryption keys, much less "calculating a

first hash value of the boot-block program" and "decrypting the encrypted hash using the public key to produce a second hash," as recited in dependent claim 49, for example. For these reasons, in addition to those outlined above with regard to independent claim 1, 29, and 42, Applicants respectfully assert that dependent claims 19, 36, and 49 are allowable over the cited references, taken alone or in combination with each other.

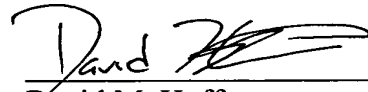### *Claims 11, 20, 31, 37, 44, and 50*

As stated above, the Examiner rejected claims 11, 20, 31, 37, 44, and 50 as obvious of the Mattison reference in view of the Miller reference and in further view of the Davis reference. Applicants respectfully assert that dependent claims 11, 20, 31, 37, 44, and 50 are allowable based on their respective dependencies on independent claims 1, 29, and 42, because the Davis reference does not cure the deficiencies described above with regard to the Mattison reference and the Miller reference. For these reasons, claims 11, 20, 31, 37, 44, and 50 are believed to be allowable over the cited references taken alone or in combination with each other. Thus, Applicants respectfully request withdrawal of the rejections against claims 11, 20, 31, 37, 44, and 50.

Conclusion

In view of the remarks set forth above, Applicants respectfully request allowance of the pending claims 1-55. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: <u>August 12, 2005</u>

David M. Hoffman
Reg. No. 54,174
(281) 970-4545

Correspondence Address:
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 8527-2400